

# PHENIX WEEKLY PLANNING



11/29/12  
Don Lynch

## Last Week &amp; This Week

TECHNICAL  
SUPPORT  
2012

- Short Week - Thanksgiving and Black Friday Holidays - Done
- Test new CM Hoses - Done
- Survey Beam pipe - Done
- Finish removing and storing station 2/3 north scaffolding - Done
- Continue installing VTX/FVTX (Install West start Survey) - Done
- Continue VTX Cooling System Upgrade
- Continue RPC3 Gas Recirculation Upgrade
- RPC1 North & South Cooling Upgrades - Done
- Install FVTX Rad monitors - Done
- Continue working on RPC3 shielding
- Continue window Washer safety upgrades
- Substation breaker upgrade/test (CAD) (Dec 1)
- Continue sPHENIX design support
- Continue MPC-Ex design support
- Install MTP patch bay and jumpers for FVTX in counting house.
- Add several backup MTP fibers from CH to IR
- Begin Prepping EC for move to IR

## Next Week

TECHNICAL SUPPORT 2012

- Continue installing VTX/FVTX (Install east 1/2, finish survey, continue connecting cabling and services)
- Continue VTX Cooling System Upgrade
- Remove South Sta. 1 scaffolding
- Move MuID collars to IR
- Move manlift, plates and 12 ton cart to AH
- Move EC to IR
- Continue RPC3 Gas Recirculation Upgrade
- Continue working on RPC3 shielding
- Continue window Washer safety upgrades
- Substation breaker upgrade/test (CAD) (Dec 1)
- Continue sPHENIX design support
- Continue MPC-Ex design support
- Install MTP patch bay and jumpers for FVTX in counting house. - November
- Add several backup MTP fibers from CH to IR - November

## Substation breaker upgrade/test (CAD)

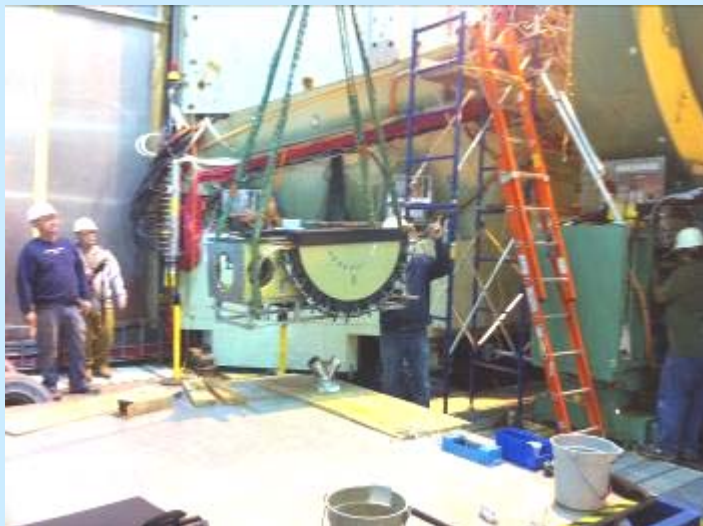


Upgrade & Test to be performed  
~Dec 1. Drawings/wiring schemes  
by P. Giannotti have been reviewed  
and approved by CAD. Paul will be  
present and work with line crew to  
install and with CAD to test (blue  
sheet test)





TECHNICAL SUPPORT



# RPC Station 1 North and South Cooling Upgrade & Monitoring



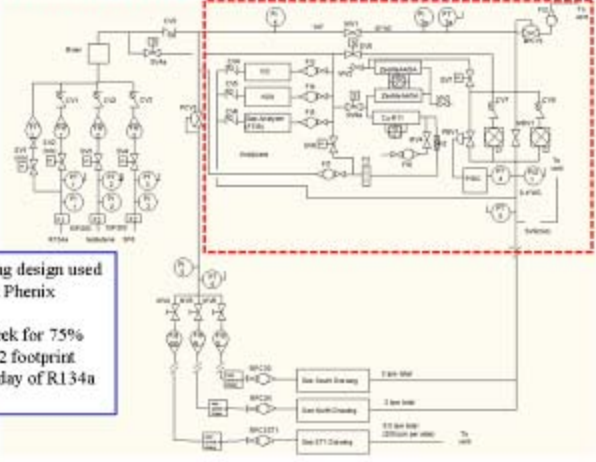
South



North



## Run 12 Shutdown Work Overview Gas/Cooling Systems Recirculating Upgrade to RPC Gas System



- Based on working design used for many years at Phenix
- Save money
  - \$3k per week for 75%
- Reduces lab CO2 footprint
  - 60 lbs per day of R134a

June 20, 2012

18



## VTX/FVTX Cooling Upgrade

- Piping ~ done
- New filtration system in place, mostly connected
- Big Wheel manifolds assembled ready for installation at 1008
- Chiller 1 repair done



## RPC Recirculation Upgrade

Recirculation Piping installation - In Progress

GMH rack moving along  
Purification system controls assembly,  
installation and testing - D. Northacker to finish  
in December

PC upgrade - November

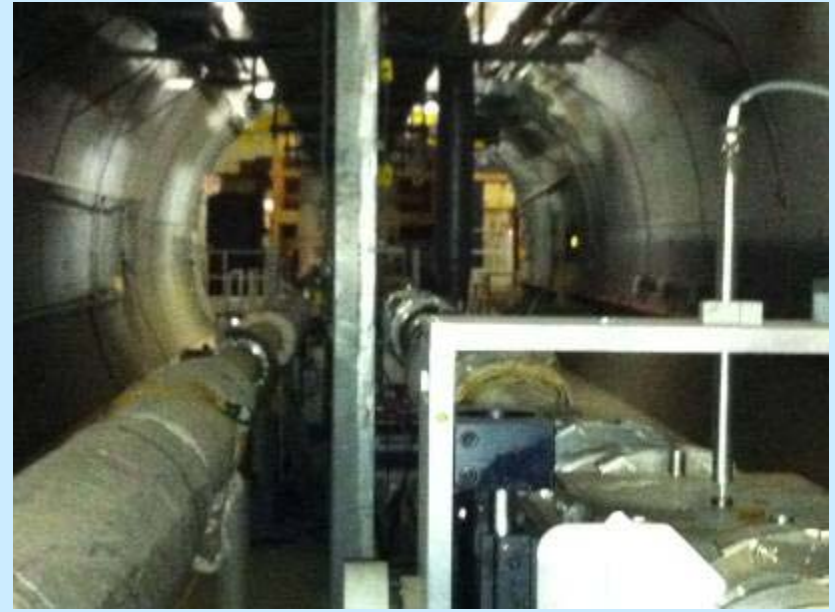
Analyzer procurement in process (~4 months)

## RPC Background Attenuation Project

TECHNICAL SUPPORT 2012



Looking towards RPC3 North  
 ← East                      West →



Looking towards RPC3 South  
 ← West                      East →

Large shielding modifications at Q2 upstream  
 north and south to be planned and installed by  
 CA-D (Dave Phillips) by 12/14/2012. **In**  
**progress this week**



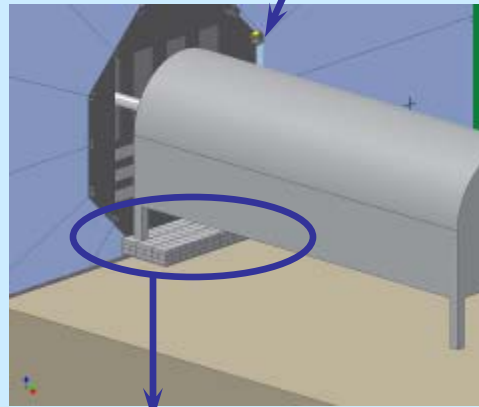
# RPC Background Attenuation Project

TECHNICAL SU

Under DX at RPC3 North  
 ← East                      West →



Under DX at RPC3 South  
 ← West                      East →



144 Steel bricks, 2x4x8,  
 stacked in 3 high, 16 wide, 3  
 rows, respectively by 11/21



# Window Washer Remote Pin Removal and Winch/spooler safety upgrades

Space available:  
16.5" x 27" x 28" h





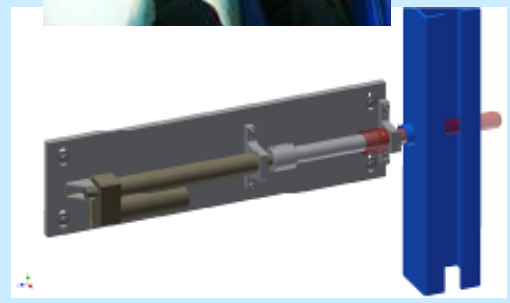
**AutoAdvance LINE SPOOLER**  
ALL FRAME SIZES

**Create perfect line spooling for any winch or hoist.**



Auto Advance Line Spoolers eliminate the need for a fixed sheave precisely located in relationship to the drum to achieve proper line spooling.

Auto Advance Line Spoolers work with any size of line and even with differing sizes of line on the same drum to create optimal line spooling. Large diameter sheaves in the Auto Advance Line Spooler ensure the line is not damaged by small radius bends.



## Scaffolding Storage Boxes

TECHNICAL  
SUPPORT  
2012

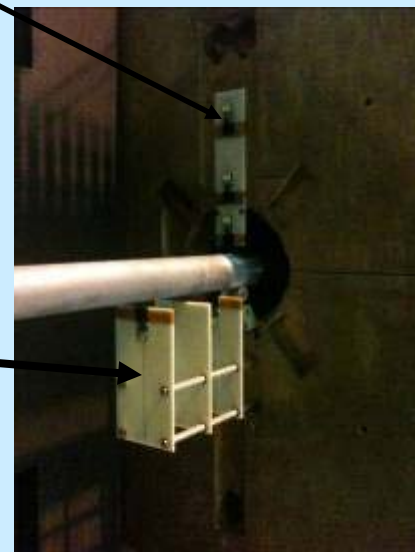
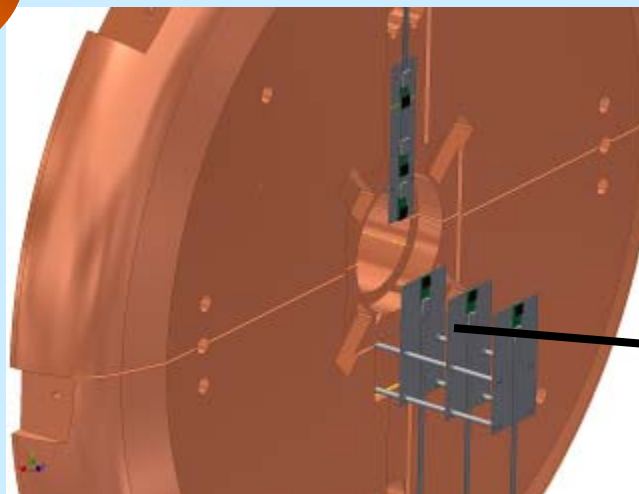
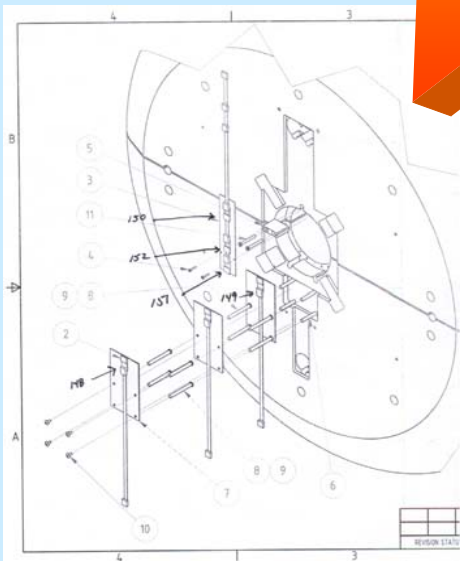
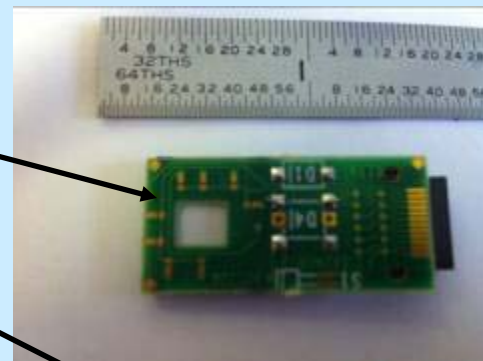




Rad monitor sensors

X/FVTX Radiation Monitoring Test

**DONE**



Mount 6 Rad monitor sensors in the south nosecone cavity, 2 sets of 3, 1 set at 3.5, 8.5 and 16.2 mm radially from nominal beam axis and adjacent to the nosecone, the other 3 at 3.5 mm radially and varying z coinciding with FVTX disks



**New Electrical Work** for 2012 Shutdown, to be accomplished as time is available

1. Remote breaker switch - parts ready install partially completed. Repaired broken breaker installation and blue sheet test of breaker scheduled fore Dec. 1

### PHENIX Electronics Upgrades

1. Install second MODBUS server in counting house. - TBD

**Additional Work for 2012**, not yet scheduled, to be fit in as available

1. identify obsolete services passing through sill and remove them. - As time is available
2. Cover for services coming from IR through sill. - After Shutdown
3. Plan for stripping out TEC electronics and services to free up TEC racks. - As time is available

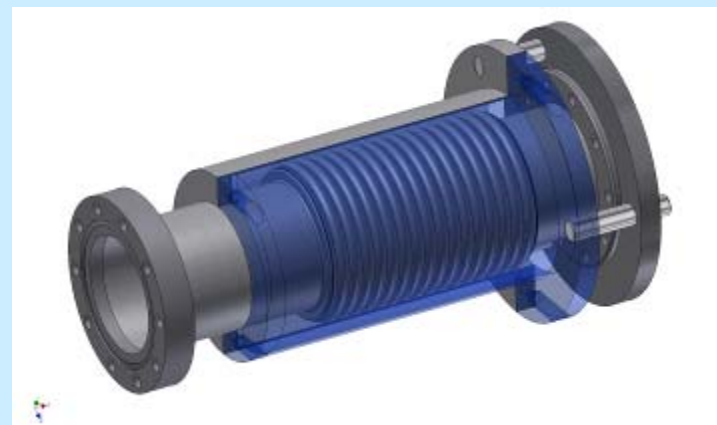
## Remaining Work Permits/Procedures for Shutdown 2012

- RPC Background Attenuation Shielding @ DX Magnets - Done, set for approval
- Window Washer autospool and remote pin removal program - Done
- MuID Collar IR Holding Area Support - Done
- End of Shutdown (F) - Done
- FVTX Radiation monitoring - Done

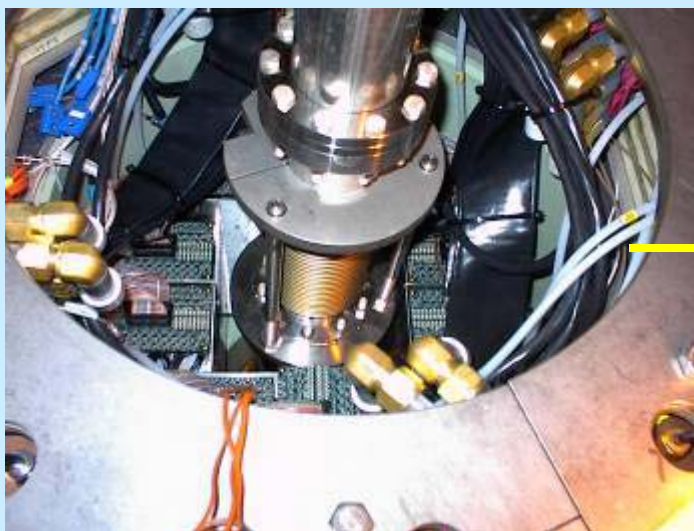
**DONE**



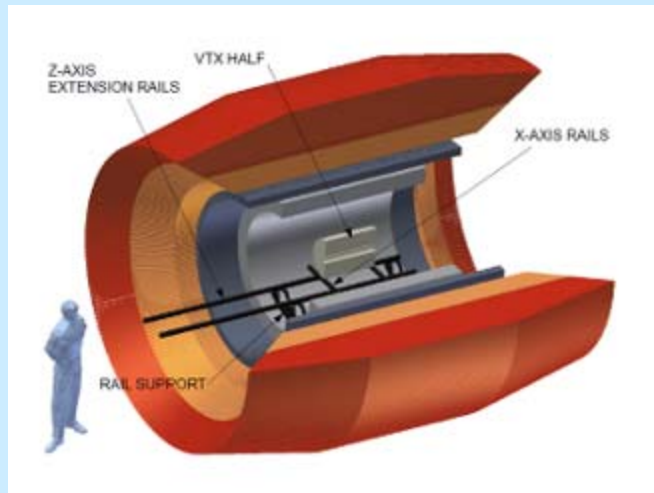
Existing vacuum bellows anti-squirm  
In MPC S Cavity



Proposed vacuum bellows anti-squirm  
In MPC S Cavity to accommodate MPC-Ex



MPCS Flat cables replaced with round cables.

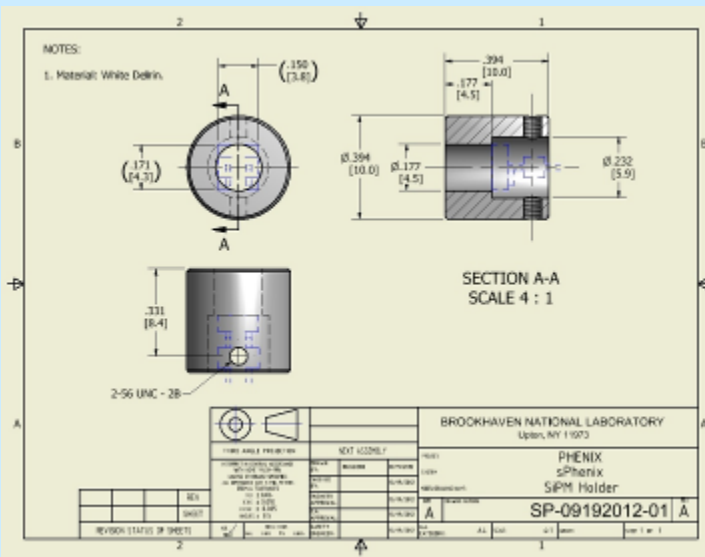
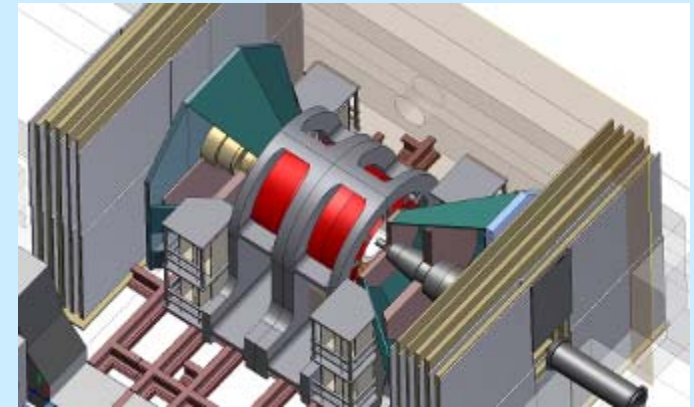


## sPHENIX Proposed Upgrade

Work continues evaluating engineering tradeoffs for EMCal and HCal design, materials, etc.

BNL Review last week

Prototype HCal and EMCal in progress



Silicon Photo  
Multiplier Holder



TECHNICAL  
SUPPORT  
ZONE

## TECHNICAL SUPPORT ZONE

Re-capacitation and air manifold upgrades	
Re-install MMS lampshade	Done
Capacitor Clamps and air manifolds (North)	Done
Remove station 2/3 north scaffolding	Done
Test, survey (at Chemistry and IR) and re-install VTX/FVTX	Done
RPC 1 North cooling upgrade	Done
RPC 1 South cooling upgrade	Done
Thanksgiving Holidays	Done
Install VTX/FVTX Rad Monitors	Done
Re-install MMN access panel on lampshade	11/30/2012
Prep for EC roll in	11/12-11/30/2012
Substation breaker upgrade/test (CAD)	12/1/12
VTX Cooling System Upgrades	12/1/2012
Install MTP patch bay and jumpers for FVTX in counting house.	12/5/2012
Add several backup MTP fibers from CH to IR - November	12/5/2012
MuID Collars to IR, plates, manlift and 12 ton cart to AH, & Roll in EC	12/3-12/7
Prep IR for run	12/7-12/12/2012
RPC tunnel Shielding (Dave Phillips)	12/14/2012
RPC Recirculation Upgrade (except	12/21/2012
RPC Shielding under DX magnets	12/21/2012
Window Washer pin & spool upgrades	12/21/2012
Christmas Holidays	12/21-1/1/2013
Pre-run commissioning and prep for run 13	1/11/2013
Pink/Blue/White sheets	12/12/12-1/11/2013
Start run 13	2/11/2013

From Ray Karol:

Winter is coming and with it snow, and, unfortunately, increased risk of heart attack and back strains. People often try to clear snow shortly after waking, when their body chemicals are most prone to heart attacks. Heavy exertion from shoveling increases blood pressure, and the cold causes the body to divert blood flow from the limbs to the torso. These factors create a perfect storm of hazards for your heart.

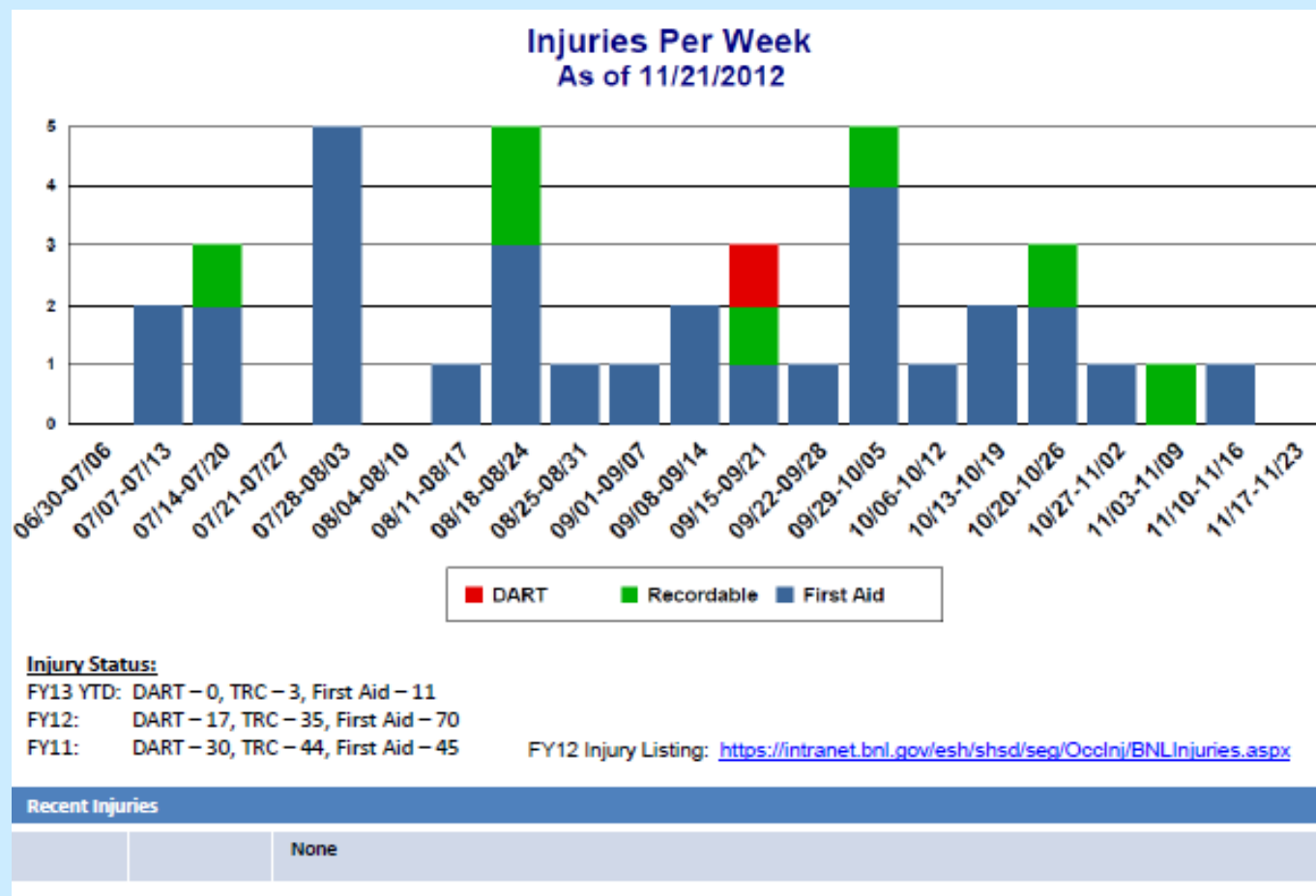
The right shovel can help and also some simple rules:

- Wait at least one hour after waking before shoveling snow.
- Ease into the activity slowly.
- Take breaks. While it's tempting to finish it all in one go, remember that you can't shovel from the hospital gurney.
- Make sure you are well hydrated. This will help cut down on clotting risks.
- Keep yourself warm with layers of clothing, which prevent blood from leaving the limbs.

Observe the following to avoid disc problems while shoveling:

- Stretch before you shovel.
- Push, rather than pull, the snow as much as is practical.
- Keep the load close to your body.
- Scoop while pretending to look up to keep the spine's natural curve.
- Consider using a curved-handle snow shovel that lets you load and unload snow with a reduced lift distance.
- Face the spot where you want to throw the snow. Twisting is a bad idea when lifting.
- Use anti-stick spray or automotive wax on the shovel to prevent heavy clumping of wet, sticky snow







Recent Events		
11/19/12	Non-Reportable	<p>The BNL Hoisting &amp; Rigging Inspector observed the potential presence of oil between the shaft casing and elevator jack, approximately 24 inches from the top of the casing. Environmental Protection Division (EPD) personnel were informed and will perform follow up sampling/evaluation operations.</p> <p>UPDATE 11/20/12: EPD investigation/remediation efforts removed ~55 gallons of hydraulic oil from the area between the shaft casing and elevator jack. The NY State Department of Environmental Conservation (DEC) will be informed through the routine spill report process. (<a href="#">Event Link</a>)</p>
11/16/12	SC-BNL	<p>The Bld. 480 Lab 1-113 laser passthrough keypad interlock malfunctioned. The researcher was getting ready to enter the passthrough code on the keypad when he felt what seemed like a static electricity discharge across the air gap to the metal face plate (the low voltage system runs at maximum 18 V). The passthrough function was activated without him entering the passcode, and did not shut down the laser which was in operation. Normally, if an incorrect code is entered the laser would be deactivated. If a correct code is entered, entry is allowed without deactivating the laser. The Class IV laser was operating. Configuration of the laser, door, and interlocks in place at the time:</p> <p>The laser was operating in a beam enclosed configuration, allowing trained personnel to work without eyewear. The laser was "blocked", a condition which permits untrained persons to enter. The lab door was not locked (mechanical key). The laser shield curtain between the door and the laser was closed. The researcher was appropriately trained and wearing proper eye protection prior to entry. (<a href="#">Event Link</a>)</p>

## Where To Find PHENIX Engineering Info

22 Days Until the end of the Mayan Calender

32 days until the "Fiscal Cliff"



[http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\\_SSint-page.htm](http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm)

